PCT/NL2004/000795

## **CLAIMS**

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1. Method of operation to bring parallel fibres, threads, yarns and the like, further referred to as fibres, from different supply points and with unequal exit force to a required mutually equal or near enough equal tension with the characteristic feature that the parallel fibres are first transported over one or more motorised cylindrical rotating elements (rollers), of which the peripheral velocity is greater than the velocity of the parallel fibres (1<sup>st</sup> processing phase) such that at the end of the 1<sup>st</sup> processing phase the tension of the fibres is nil or near enough nil, and the fibres are then transported over a roller that transports the parallel fibres without any slippage or near enough without any slippage (2<sup>nd</sup> processing phase) and finally, if a greater tension is required, the fibres are transported over one or more stationery or motorised rollers of which the peripheral velocity is less than the velocity of the parallel fibres (3<sup>rd</sup> processing phase) such that at the end of the 3<sup>rd</sup> processing phase the required collective tension is achieved.

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- 2. Method of operation according to conclusion 1) with the characteristic feature that opposite the roller in the 2<sup>nd</sup> processing phase a second roller is placed, between which pair of rollers the parallel fibres are transported.
- 3. Method of operation according to conclusion 2) with the characteristic feature that the two rollers in the 2<sup>nd</sup> processing phase are pressed against each other with an adjustable force.
  - 4. Method of operation according to conclusions 1) to 3) inclusive with the characteristic feature that the roller(s) in the 2<sup>nd</sup> processing phase are motorised.
  - 5. Method of operation according to conclusion 1) with the characteristic feature that against the roller in the 2<sup>nd</sup> processing phase an endless belt is placed, which is situated such this encircles a part of the circumference of the roller placed against it.

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- 6. Method of operation according to conclusion 5) with the characteristic feature that the roller and the endless belt in the 2<sup>nd</sup> processing phase are motorised.
- 7. Method of operation according to conclusions 1) to 6) inclusive with the characteristic feature that the parallel fibres are connected to each other.

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- 8. Construction to bring parallel fibres, threads, yarns and the like, further referred to as fibres, from different supply points and with unequal exit force to a required mutually equal or near enough equal tension with the characteristic feature that the construction functions according to the description in one of the preceding conclusions.
- 9. Construction according to conclusion 8) with the characteristic feature that the part concerned with the 1<sup>st</sup> processing phase (de-tensioner) consists of two separate frame parts (1) and (2), whereby on each frame part a number of motorised rollers (5) and (16) are placed in line, which can mesh with each other such that the (part) encirclement by the parallel fibres of the surfaces of the rollers (6) and (17) can be adjusted.
- 20 10. Construction according to conclusion 8) or 9) with the characteristic feature that the part concerned with the 2<sup>nd</sup> processing phase (slip lock unit) is formed by a motorised roller (7) and an endless belt (11), driven by two driving rollers (9), whereby the roller (7) and the endless belt (11) can move towards each other such that the part encirclement by the endless belt (11) of the roller surface (8)
  25 can be regulated.
  - 11. Construction according to conclusions 8) to 10) inclusive with the characteristic feature that between the de-tensioner and the slip lock unit a movable element is placed at right angles or near enough at right angles to the parallel fibres, which is equipped with a force absorber.

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- 12. Construction according to conclusions 8) to 11) inclusive with the characteristic feature that the part concerned with the 3<sup>rd</sup> processing phase (tensioner) is implemented in accordance with the de-tensioner as described in conclusion 9).
- 13. Construction according to conclusion 12) with the characteristic feature that immediately after the tensioner a movable element is placed at right angles to or near enough at right angles to the tensioner, which is equipped with a force absorber.
- 14. Method of operation and/or construction as described and/or explained by means of the illustrations.